

(1) GENERAL INFORMATION:

- (2) INFORMATION FOR SEQ ID NO:1:

- (ii) MOLECULE TYPE: peptide

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 15 amino acids

-71-

- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Tyr	Lys	Asn	Asp	Asp	Thr	Asp	Ser	Thr	Ser	Thr	Asp	Asp	Met	Trp
1				5				10					15	

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 9 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

Pro	Asn	Lys	Asp	Asn	Asp	Gly	Gly	Ala
1				5				

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 20 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: other nucleic acid
  - (A) DESCRIPTION: /desc = "Primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

AGGATCAAGT CATAATGGGA

20

(2) INFORMATION FOR SEQ ID NO:5:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 20 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: other nucleic acid
  - (A) DESCRIPTION: /desc = "Primer"

(iv) ANTI-SENSE: YES

GCTGGAGTCT GATTACAAC

20

(D) TOPOLOGY: linear

(A) DESCRIPTION: /desc = "Primer"

GAAGTAGTCG ACACCTGT

18

(D) TOPOLOGY: linear

(A) DESCRIPTION: /desc = "Primer"

GTTTGAGACC TTCAACACCC C

21

(D) TOPOLOGY: linear

(A) DESCRIPTION: /desc = "Primer"

GTGGCCATCT CTTGCTCGAA GTC

23

(B) TYPE: amino acid

- 73 -

- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Met Gly Ala Phe Leu Asp  
1 5

(2) INFORMATION FOR SEQ ID NO:10:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 28 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid  
(A) DESCRIPTION: /desc = "Primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

CGGGATCCGC ATGGGAGCAT TTTTAGAC

28

(2) INFORMATION FOR SEQ ID NO:11:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 5 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Thr Asp Asp Met Trp  
1 5

(2) INFORMATION FOR SEQ ID NO:12:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 27 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid  
(A) DESCRIPTION: /desc = "Primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

CGCGGATCCT TACCACATAT CATCAGT

27

Sequence = 5'-GGGATCC-3'

## (2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 64 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: other nucleic acid  
 (A) DESCRIPTION: /desc = "Silencer Region"

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

ACTCCATCAC TAGGGGTTCC TGGAGGGGTG GAGTCGTGAC GTGAATTACG TCATAGGGTT 60  
 AGGG 64

## (2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 22 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: other nucleic acid  
 (A) DESCRIPTION: /desc = "Mini-silencer region"

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

ACTCCCATCA CTAGGGGTTC CT 22

## (2) INFORMATION FOR SEQ ID NO:15:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 1573 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: other nucleic acid  
 (A) DESCRIPTION: /desc = "35-3.seg (Figure 3)"

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

AAGCTTGTCA AAATTACTAT TCAGTGTGAT TTTTAGTGGA TGAAACCTCA TGACTAGTAT 60  
 ATTATGACAT TAGCTTTGCG TAGTGAAGGC ACAAGCTGCT AAGTGTTAG GGATGTATTT 120  
 TGCCGTAGCC TGTATCACNC CAGGTCCTGG GCTCGGTTCC TAGCATTACA GGAAAAAGCA 180  
 GGCGGTGGTT GACCTTTAAT GAATGGATTT TTCAATTTAG AAGTTGGTTT CATTTTAAAG 240  
 AATTCAAAAA TGTTCCCAT AGCACTTTGT TTTGACATTG AGATCAGCTG CTAATTGAGG 300  
 TCCAGTATAT ACTTAGAAAA CTGAGCGAAA CTTTGATGGA CACACACACA CACCCCTGTT 360  
 GTTCATTTAA TAATTGAACT AAATAAAATA CTGTTTAGTC ATCCACGTAA GCAAGAGGCC 420

TGTGTAAACA GTATTTGTAT TAGTAAAAAC TTTATAACAT AGTTACATAA TCAGCATCAT 480  
 TTTTTTTATG GACCTTATAG TTGGCTACTT CACTGGGTTT GTTATAATTT AATCAGACTC 540  
 CTAAATAGGT TAAATTTCTG AATTGCCTAC TTCAGTTTTG AAGAATTATT TTGTTTCATA 600  
 ATTTCCCATG CATATCTGGT AAATAATTCT GGATTGTTTC TAAAGGGGAG AGCAAGGTCT 660  
 CTTATGCAAA GTGAAATCT AGATATGCTG TTTGTAAGAA TATAATAGTG ATAAAGTAGT 720  
 GTCCTTTTGC TCAGTGCCTC CATTCTTACC AGGCTGTGAC TGATCTTCAG TATTATTCAG 780  
 ACAGTCACTA TTAATATATC CGTTGCACAG TGGGGAAATT GAGGGAAAGT AGATAGGCAT 840  
 CGGGTATCTT AATCATAACT CACATATACC CAGCTGGCTA GTCAGCCTAG CTAAGACAGT 900  
 TCACACCCAG TTGAGGCAGC TTGCTGTTGG CCATTAGTAG GTAACCTAAT GGCTTGGTTT 960  
 CTTCACTGGT AAGGTGGGGA TATAATAATG CCAATAATTG CATAATGATT AAAGACATTA 1020  
 ATATATTCCA TAAAATTTCC TGAATAGTGC TTAGCTGGTA CCCCTCCCCA CACATGCACC 1080  
 CCAGTCCAAT GTTCAGATGT TTACTTTGTT AAGCCCAGTT AATCCATTCC CCCTAATATC 1140  
 TTCTCCCAGT TTGAAGAANG TTGAAGAATG TTGGGCTTGT TAGTTTAATT TTTTAAGAAG 1200  
 CATATCATGT TGCTTTTTTA AAACATGTTT CTTTGGGTTT TGGCTTCCCC TTTTGAAAG 1260  
 AATTCCAATT TACACTTATG GAAGAAAGCC ATTGTCCCCT CCAATTTCCC CCCCTGTCCC 1320  
 TTCCAATAC AGCCCAACTC CCCATGTTTT GACTTCCTCC CCTGAACCAC CCCGTTCTCC 1380  
 TGTTTTTCCC TCCCCANAA AAAAAACCA ATAATTTGAC TTTGGTAATT GAATTTCCCG 1440  
 CCNGTTAGGC NCCTGAATTG CCGAAATAAT TCCCCGTGC NCCNGGANT TTTGGCACCC 1500  
 CCTGCCCCCT AACCTGTTCT GCTGCCCCC ATTTTAAAT GGCTTGCCGC NTTACNCAA 1560  
 ANACTGCCTT TCC 1573

## (2) INFORMATION FOR SEQ ID NO:16:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 2580 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc = "35-T7.seg (Figure 3)"

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CTCGATCTCA CAAAGTCACA GAGCTCTTCG TTTCCCATGA CATCCCAGAT ACCATCACAT 60  
 GCAAGAATAA TGAAGTATC GTCCTCTTCA GACCTTTCAA TATCATGGAC TTCTGGCTCT 120  
 GGTGAGACGA GCTGCTCTGT GGGACCTTTT CCATGGACAC ATTTGTAATC GAAATCCCCA 180  
 AGGGCCCTTG ACACAGCCAG AGAGCCATTT ACACGCTGAA TCATCACAGA GCCCCCTGCA 240  
 TTCTGAATTC GTTCTTTTTT CAGCGGGTTA CTTGGTTTGT GGTCTTGTGT GAAGAAGTGA 300

ACTTTCCTGT TTCTACAAAG CAAACCTCTC GAGTCTCCAC AGTTAATGAA GTAAGTATGT 360  
 TTGGGGAGAA ATTAAGACCC CCACAGCTGT TTGACCCACT TCCTATCTGC ACCATGTTTT 420  
 CCTTCTCCT GACATGACTC CTCATGTTGT TTCCATCAAT CTCCCAGAAA AACCTGTTCC 480  
 TGATCCCCAT TCCTTTACAT TTTCCACAG AAAGGTGCTC CCTGCAGAGC CTTTTAAAA 540  
 CCCTGGTTTA TTGGTGATGT TGATTCTNAA CAAATGCTCC ACAGCCAGTA TTTNGGCAAC 600  
 CTGAAAAAC CAGCATGCCC ATCCATATAC AGCCAAGAAT GACCATGTTT TCCAGTTCCA 660  
 CTTTNGGCAA ACCCAATCCA CAGCCGTTNT GCGCATCCTC CCATTTCAAC TCCGCCCAAC 720  
 CNTTGCNTGC TGCNTTAAGC CATATCGCAA CCCATCCCCC CTGCCCCCTG GGGCATTATG 780  
 CNTTCCATC TTTGGTTGTC TAAAATGCTC CCATTATGAC TTGATCCTCT AGGTCTGCAA 840  
 AGGAAGAGAA ATAAGAAAGT TAGTAACTGT CTTTGAAACA AAGCACACAT CCAACAGTCT 900  
 TTTGAAGCA CCTACGAGAT ACAAGGAAAC GTAAAACTC ATAGGCTATA GCCATAAGCA 960  
 TTGTTCTACT GACTTGGAAG ATGTAGAGAT TAATAAGAAA GGGAAAGGCT GATCAAGTAC 1020  
 AGCTCAACCA GACAAGCAGC AGATGGAAGT AAGTCACCAG GTAAAAGAGA GCTTGTTTGC 1080  
 CTCTCTGTGA TACCAAGGAG GCCCAGCAGT GACCATTAAC TTACATGAAC TAGGCAAGAT 1140  
 TTCAGGGTGC ATTCATCATA TGTAACCTCT CAATTAAGTT GTGTGTTGAT TAAAAAAAT 1200  
 AATTCATAGA AACATACAAG TATCTACTAC TTCAGGGAAC CTTAGCTAAG TACTCAGGAA 1260  
 TGTGAGAGT TTGATTCCAT GCTATTTAGT TTTGTTTCTA CAACTAGATA CCTTTGGTAA 1320  
 AAATAAAAAG TAATTACTCA CACTGGTCCA AATTTTCAGT GCCTTGTGCA GGTCATTCTC 1380  
 TTTAGCTGGA ATTCCCTGCC TCACCTCTTT ACCAACAGAA AAAAAATACA CCTGTTTCTA 1440  
 TCCTTTGAAA TCCAGTTCAA TTGTTCCCCC TTCCTCCAGA CTTTACAGTC CTTGAAAAAA 1500  
 ACAAGTTATT AACTACAGAA GTCAGCTTCC ATTTCCAGTT NGGAATGTTT TTTAATGAAC 1560  
 AATTTTATTG TTCNAAATCT NACNATATGA TAACTAANCN AATGGTAATA ATATTTTCAN 1620  
 CCCTGCCCTA TGGCCGCTNT TTTTAATCCT NAAAAAATC NAAGGTCTAT TCCNCCCN 1680  
 CTTGCCAATA CTTNACANCN CCAGTTCCT GATCTGGAAT GGACCCACAA AGGTCAAGAC 1740  
 TTAGGTTANC CCTTGCTCAC AAATAAAGA AAATCTTAAA GGAGAACAGA ATACTGAAGA 1800  
 GAGAAATGAG GGTGAAGGAC AGTGTTGAGG TGACGTTCTG AAACCAGGGG ACTAAANATA 1860  
 CCANAANTGG TGTTCAGAC AGAAATGGTA TGGAAACTC CTTAGGAAAG AAATGACANN 1920  
 TNTGTTTCG CAGCAACCCC CNCACATGGC TTTCTCTTT TCCTTCTGCT GATTAAGTGA 1980  
 TGCACNTGGT ANAAAAGTCA ACANACCCCT CCTCCACNCA GACTCCACC GAGTACANNG 2040  
 GCCCATGTGC TCANTACACT CTGCCCCAAA CTCNNANNAT TCATTCNNCT CCCNTGTNA 2100  
 TTTATNAGGG CCTTTCCNT CAGTTNTCTN ATCNCCAACG GANATTANCC TTCCANNAT 2160  
 TTACCCCN TTTGTACANC ACATNNTGGC NNGTGCCACN GTTANGCGTC GGCNTCCCTG 2220  
 TTNCACTNCA TCCCTCATCN TTAGGCCANG TTTGATTCTC CNGTGCANAN TTTCCGCANN 2280

ANCNTACCCC	TTGCACCNCT	CATNTCTMNG	GAANAACCTC	CGGTTCTGAA	TCTNCCCCNN	2340
TCCCGTCNCT	CCCCNTTCT	TTCTTTTCTC	TANTTTTTTC	CNNGGNACGG	GTTGNGGTNA	2400
ATNAANNCCC	CTCCTTCGTC	TATTCANCCC	TTCCTATGNA	CACTTCCTGN	CCCCCTATCT	2460
CTCTATNTNC	TNCTCTCTAT	ATCTNNATCC	CNTCTTCNCN	TGCCNCTCCC	TNGTNTTNNA	2520
NCGGGTATTT	NTNTTCTCC	TCNTCTTCTT	CCCCTNTNTA	NCCNTNCTNC	NNNCNNNCCC	2580

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 830 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc = "5H-1 (Example 10)"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

TGGGGGAGAG	GA CTGAAATA	TTTCCACAGC	CTTTTTATTG	GTGGTGATGG	TAGTGATGGT	60
TAGGATTCTT	TCTTTCTTTC	TTTCTTTCTT	TCTTTCTTTC	TTTCTTTTTT	TTTTTTTTTT	120
TTTTTTTTTT	GAGACAGGGT	TTCTCTGGGT	ACTCCTGGAA	CTCACTTTGT	GGACCATGAA	180
TGACATGAAT	ACTTCGATAT	ATACATACAT	ACAAAGACAC	ATATTTTTTA	AAAGAGAATT	240
AGAGTAGAGC	TGGGGCAATT	GTGGAACACA	CCTTTAACCT	CAGGCAGATT	TCTGCGTTCA	300
AGGTCACCTT	GGATTACAAG	GCAGCTAGGG	CTACACAGAG	AAACCATATC	TCAAAAAAAAA	360
GAAAAAATAA	TGAAAGAAAG	AAAGGAAGGA	AGGAAGGAAG	GAAGGAAGGA	AGGAAGGAAG	420
AAAGGAAGGT	AGGAAGAAAG	GTATTTTCCT	AAAAAAAAAA	AAAAAAAAAA	TTTATTCCGG	480
GCAGTGGTGG	CAATGCTTTT	TAATCCCACC	ATTTGGGAAA	GCAGAGGCAG	ACAGATTAAA	540
TTTCAAGGC	CCACCTGGTC	CTACACAGTG	AATTCCAGGA	ACACCTAGGT	TTACCCANAA	600
AAAACCCCCC	CTTGAAATAA	ACAAAAATAA	ATTAAATAAA	TAAAATTTAA	AAATAAAACC	660
CGGGCGTTAA	ACCCNCTTTT	ATCCCCCAC	TTNGGAAGCA	AAAGCCGGCN	GATTTCTGAA	720
TTCNAGGCCN	CCCTGTCTAT	GAATTANTTC	CCNGAACACC	CNAATTTTTC	NAAAAACCCC	780
CCNTTTCTTA	AAAAANCCAA	ATTATTATTN	ATTAATTAAA	TNAAATTACC		830

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 838 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc = "AN8T7 (Example 10)"



## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

GGAGTCCAAC AATGGTTTCC ACTTGTCTGG CGGCCGCTCT AGAGTTTCCC ATAAGCTGGA 60  
CTGAGAGATG GTGTGATTGC TGTGGGTGAC AAAGACAGAG GCACCTTTCA TCTCTACCTT 120  
TCTCTTGTTT TGTGTTTGT TTGAGACCGG TTCCCACTAT GTAGACCAGG CTGGAGGACA 180  
GGGTCTCACT ATGTAGACCA GGCTGGCCTT GAACTCAAAG ACATCTGCCT GCCTCTGCCT 240  
CCTGAGGGCT GGGATTAAAG GCGTGTGCTG CCACTGACAG CTTCTATCCT CCTGTCATCA 300  
GTCCCGGCTC ACAGGGCCAG AAGATCTCTT CTATGCTTCC ACTATTTCCC CAATCCATTC 360  
CCACGGCAGC CTCTCCATCT CCCTACCACC AAGACAGCAG CCTAGTGATA TAACAAAAC 420  
TTTATTACAA GGAAACCGGA AAACAAAATC ACAACCAATC ATTTCTATCT AGTCCCTGCC 480  
CTAGCCCTCC CTCCAAGCCC CTACATATCC TCCATCTGAG GGGGATGCAT GCGTTGGGTG 540  
GGAGCTGCCG GCATCCTTAT CCTGGTTCCT GGAGTAGNGA AGAGTGGTTC TTTTCAACGN 600  
CTAGGGNNTT CCCCTCCAAG TTNGGACCTC TCTTCCCAGG NCTTCNCCCC TCCCTNACAG 660  
GGNACAAAAA ACCAGGNACG GCACNACGCC AGGNAGGAAG GGACTCTTGG NAATGTTGGG 720  
CAGGACTTGT CCTCAGAATT CCNNGGAGGA ATCAAGGGCC TTGAATTCGG GAACCACTNC 780  
CGAGGNCTTC ANCANGGCAN AGTTCAATTT TCCATCCCAG TTGGCCCANCT CTGGCCNG 838

## (2) INFORMATION FOR SEQ ID NO:19:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 180 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc = "CHINT (TABLE 5)"

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

TAGTGCCGGT CAAGGAACTG AACGTGCGAT TCCGGGACAG GCTACCCACT CCGATCCCAG 60  
GAGAAGTTGT CATGGTGAGG GCCACCCTAG GTCTCTGCCC CTGCTGTGTC CCCCATCTTA 120  
CCCATCCAGT AGGATCTAGA GGCTGTCGCC CCCTTGTTGA ATGCACAGAA GTCACAAGCG 180

## (2) INFORMATION FOR SEQ ID NO:20:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 175 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc = "HUMMDB (TABLE 5)"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

CCTCACCTCC GCCCTGTTTC GTCCAGGTCC TCCGGGTCAG GCTACCCCCG TCGCCGCCAG	60
AGCGCGGGGG AGGGGAGAGC TTCCTTTGTC TCCTATGCCT CCTCCCCCCA TCCCGGCTCT	120
CCTGCGGGCA AGCGCCGAGG GGACACCGGG GAGTACCCCA CCTGAACCTC TGGGG	175

Sequence of the gene